

**DIRECT TESTIMONY OF
JOHN S. BEIER
ON BEHALF OF
SOUTH CAROLINA PIPELINE CORPORATION
DOCKET NO. 2004-6-G**

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A. My name is John S. Beier. My office is located at 1426 Main Street, Columbia, South Carolina, and I am Gas Analyst responsible for the administration of the hedging program of South Carolina Pipeline Corporation ("SCPC" or "Company").

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND BUSINESS BACKGROUND.

A. I am a 1992 graduate of the University of South Carolina, where I received a Bachelor of Science Degree in Accounting. Following graduation, I worked for a year and a half in public accounting with the CPA firm C.C. McGregor and Company. I have successfully completed the CPA exam and the work requirements necessary to become a licensed Certified Public Accountant in the State of South Carolina. I am currently a member of the American Institute of Certified Public Accountants and the South Carolina Association of Certified Public Accountants.

In January 1994, I joined SCANA Energy Marketing's Financial Accounting Department. The following fall I began working with SCANA Energy Marketing's Director of Risk Management in hedging the natural gas reserves for SCANA's unregulated oil and gas subsidiary. In the summer of 1995 I accepted the position of Risk Management Analyst for SCPC and conducted the Company's hedging

1 program until December 1999. Over the next four (4) years I served as Supervisor
2 of Gas Accounting and Regulatory for SCPC, and in 2003, I was promoted to my
3 current position – Gas Analyst.

4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. The purpose of my testimony is to discuss with the Public Service
6 Commission of South Carolina (“Commission”) SCPC’s hedging program, including
7 the program’s objectives and results.

8 **Q. PLEASE EXPLAIN THE HEDGING PROGRAM AS IMPLEMENTED BY**
9 **SCPC.**

10 A. In order to explain hedging fully it is necessary to first discuss the market in
11 which SCPC competes for its natural gas supplies. Today, the natural gas market is
12 an unregulated, open market that is both dynamic and extremely volatile. Because
13 natural gas is an unregulated commodity, the forces of supply and demand largely
14 determine natural gas prices; therefore, natural gas prices are extremely volatile
15 and can rise and fall rapidly without much notice to gas buyers, such as SCPC.

16 To illustrate the volatile nature of natural gas prices, it is helpful to review the
17 range of gas prices that the market experienced during the 1996 – 2001 time period.
18 From 1996 through the early months of 2000, natural gas prices, though volatile,
19 had remained within a range roughly between \$1.80 and \$3.87 per dekatherm
20 (“Dt”). Prices only rarely went above or below that band, and then not by very
21 much or for very long. Beginning in the spring of 2000, however, prices began to
22 climb. They broke the \$4.00 per Dt threshold around June of 2000 and kept

1 climbing. During the 2000 – 2001 winter, spot gas prices peaked at over \$10.00
2 per Dt during the last days of December 2000 and early days of January 2001, and
3 these spot prices stayed above \$4.50 per Dt through April of 2001.

4 Because the price of natural gas is so volatile, SCPC is constantly faced
5 with the exposure of extreme price changes in a relatively short period of time,
6 which can translate into unexpected price increases for the Company's customers
7 that in turn may lead to (i) social and economic costs associated with higher utility
8 bills; and (ii) alternative fuel use and declining use per customer. Through its
9 understanding of the volatile nature and dynamic tendencies of the natural gas
10 market, SCPC implemented a hedging program in 1995, with Commission
11 approval, in order to mitigate the impacts of price volatility.

12 SCPC's hedging program is purely a financial program that allows the
13 Company to lock in gas prices at a cost in advance thereby providing price protection
14 in the event that natural gas prices increase. Specifically, SCPC's hedging program
15 uses historical consumption data to determine SCPC's exposure to price volatility in
16 the market and then employs the use of financial instruments – futures and options,
17 which I will discuss later in my testimony – to reduce or mitigate the company's
18 exposure to this market risk in a reasonable and disciplined manner.

19 **Q. WHY DID SCPC BEGIN ITS HEDGING PROGRAM?**

20 A. SCPC began its hedging program to utilize additional tools available in the
21 public market to help stabilize the price SCPC, and ultimately its customers, pay for
22 natural gas. Over time the pricing of natural gas has undergone significant changes,

1 from the long-term, low cost contracts of the industry's early years, to the long-term
2 take-or-pay price contracts of the 1970s and 1980s, to the current practice of
3 acquiring gas supplies largely through short-term contracts at current market, or
4 "spot" prices. The reliance upon gas supplies based upon "spot market" prices
5 sharply undermines the ability to anticipate, plan for and control changes in gas
6 prices. As a result, many gas utilities have undertaken activities designed to
7 minimize the impact of price volatility. Price volatility is mitigated through the
8 purchase or sale of financial contracts that have been made available through
9 financial markets such as the New York Mercantile Exchange ("NYMEX"), a
10 nationally recognized market which, among other things, facilitates transactions for
11 the purchase and sale of natural gas and financial instruments related thereto.

12 **Q. DESCRIBE THE PRIMARY GOAL OF THE HEDGING PROGRAM.**

13 A. As stated earlier in this testimony, the hedging program was initially
14 presented to and approved by the Commission in 1995. The primary goal of the
15 program, as originally implemented, was to reduce price volatility through the
16 purchase of gas financial instruments at the average market price over the long term;
17 this remains the key goal today. Since inception of the hedging program, SCPC has
18 consistently managed the program in a manner designed to achieve this goal over the
19 long term, under prudent management and with the approval of the Commission.

20 **Q. IS THERE A LIMIT AS TO HOW MUCH THE COMPANY CAN HEDGE?**

21 A. Yes. By Commission Order No. 95-1253, the Commission approved a pilot
22 hedging program for SCPC, which allowed the Company to hedge up to thirty

1 percent (30%) of the system supply. Since 1995, however, there have been several
2 changes in the volumes that SCPC was allowed to hedge. For the first five (5)
3 months of the program, SCPC was allowed to hedge up to thirty percent (30%) of the
4 system supply. Based upon the early performance of the program, the Commission
5 allowed an increase to this volume up to sixty percent (60%), and in July 1997, the
6 Commission approved another increase in the amount allowed under the plan up to
7 seventy-five percent (75%) of system supply, which is the amount that remains in
8 effect today.

9 Although the company was authorized to hedge up to 75% of system
10 supply, in practice SCPC only hedged up to 75% of its estimated gas purchases for
11 firm customers, which is derived by averaging the firm purchases for the previous
12 three-years. This practice remains in effect today and appears to have been
13 formally adopted by the Commission in Order No. 2003-489 by language stating
14 that "the hedging program shall be continued at 75% of estimated gas purchases
15 for firm customers" Id. at p.10.

16 **Q. DOES SCPC ALWAYS HEDGE THE FULL VOLUMES THAT IT IS**
17 **AUTHORIZED BY THE COMMISSION TO HEDGE?**

18 A. No. The model used as a management guide, decision-making tool, and
19 statistically-based system to assist in making financial hedging decisions and
20 otherwise manage the hedging program at times may indicate that the level of
21 hedging should be below the authorized level of 75%. Moreover, the Risk
22 Management Committee in an exercise of its supervisory responsibilities may decide

1 to implement hedges at levels lower than 75% based upon many factors including,
2 but not limited to, market analysis, consultation with the developer of the model,
3 consultation with other market participants, and other publicly and privately
4 available information.

5 **Q. WHAT MODEL DOES SCPC USE TODAY TO CONDUCT THE HEDGING**
6 **PROGRAM?**

7 A. As a refinement to the hedging program originally instituted in 1995, SCPC
8 adopted in July 1997 a statistically-based system that defines opportunities to lock in
9 prices (through the purchase of futures contracts) as well as to purchase price
10 protection (in the form of call options). This system is known as The Kase
11 HedgeModel_{TM} and was developed by Kase and Company, Inc., a nationally
12 recognized risk management advisory firm specializing in the energy markets. The
13 first month's trading which was conducted using the Kase HedgeModel_{TM} was
14 February 1998.

15 **Q. WHY DOES SCPC EMPLOY THE USE OF THE Kase HedgeModel_{TM}?**

16 A. The Kase HedgeModel_{TM} attempts to stabilize SCPC's price of gas by locking
17 in purchases of futures at prices that statistical analysis indicates may be low
18 compared to market prices. It also protects SCPC's customers from extremely high
19 prices by recommending the purchase of call options should the market threaten a
20 run to higher prices. Further, the Kase HedgeModel_{TM} focuses on long-term
21 opportunities and reduces the risk that SCPC's customers will have to pay extreme
22 prices for natural gas.

1 **Q. HOW DOES THE Kase HedgeModel™ FUNCTION TO ACHIEVE THE**
2 **HEDGING PROGRAM'S GOALS?**

3 A. As stated earlier in this testimony, the primary goal of the hedging program is
4 to reduce price volatility through the purchase of gas financial instruments at the
5 average market price over the long term. The Kase HedgeModel™ functions to
6 assist management to achieve this goal by accomplishing two primary financial
7 objectives: (i) lock-in low prices which have a high probability of disappearing over
8 the long run; and (ii) purchase price protection when prices are rising or threatening
9 to rise in periods of uncertainty (meaning there is a real threat of rising prices), in
10 order to protect against extreme high price levels.

11 **Q. HOW DOES SCPC CURRENTLY ADMINISTER THE HEDGING**
12 **PROGRAM ON A DAILY BASIS?**

13 A. In order to conduct the hedging program, much market research and analysis
14 are necessary. SCPC receives market information from a variety of sources
15 including: (i) three different daily outlooks from brokers, (ii) a weekly publication
16 from Kase and Company, Inc., and (iii) a quarterly publication from Kase and
17 Company, Inc., which also updates the Kase HedgeModel™ software. All of the
18 above sources of information are largely based on technical analysis of the natural
19 gas market.

20 In addition to its analysis of the periodicals stated above, SCPC also
21 participates in a weekly conference call with Kase and Company, Inc. Moreover,

1 SCPC receives real-time market data via satellite to a computer located in my office.
2 This computer contains software that graphs the data and applies technical indicators.

3 A review of the market fundamentals is also necessary to prepare for the
4 market day. This is done by a review of journals such as *Gas Daily*, *Inside F.E.R.C.*,
5 *Hart's Energy Markets*, and *AGA Storage Report*. It is my job each day to take this
6 information, coupled with the strict guidelines set forth in the hedging program, and
7 make financial trading decisions based on all of the data, both technical and
8 fundamental. It should be emphasized that the hedging program is not used to
9 purchase SCPC's physical supply of gas. Accordingly, prior to the expiration of
10 financial instruments each month, SCPC sells that month's open positions so that
11 physical delivery of the commodity is never effectuated.

12 SCANA's Risk Management Committee ("RMC") establishes the goals and
13 objectives of the program, insures that these goals are executed in a disciplined and
14 consistent manner and requires audits to ensure compliance with the program. The
15 results of the program are reported to the RMC at monthly meetings, and to ensure
16 that the rules of the program are consistently followed and controlled. SCANA also
17 has risk management compliance personnel who independently review the trades
18 daily and verify that they comply with the guidelines of the program.

19 **Q. SINCE ADOPTION OF THE Kase HedgeModel™ IN 1998, HAS SCPC**
20 **FURTHER REFINED ITS HEDGING PROGRAM?**

21 A. Yes. Because of the volatile and dynamic tendencies of the natural gas
22 market, SCPC is constantly evaluating its hedging program and making refinements

1 when necessary in order to further protect against price volatility. Through its
2 continued evaluation of its hedging program SCPC has added functionality by
3 implementing the use of certain innovative financial instruments. For example,
4 SCPC now employs the more active use of call options and synthetic calls. (These
5 two terms will be explained later in this testimony.) It should be noted, however,
6 that as the natural gas market continues to evolve, it may become necessary for
7 SCPC to employ the use of additional financial instruments to assist the Company
8 further in protecting itself, as well as its customers, against price volatility.

9 Not only is SCPC refining its hedging program as necessary, it is also keeping
10 the Commission abreast as to the technical aspects and practices of the hedging
11 program. As recently as December 2002, SCPC appeared before the Commission in
12 a workshop devoted to SCPC's hedging program and, among other things, (i)
13 presented a comprehensive review of the Kase HedgeModel_{TM} to the Commission,
14 its staff, and any interested parties in order to improve understanding of the program;
15 (ii) discussed with the Commission, its staff, and interested parties the technical and
16 economic merits of the financial hedging program; and (iii) discussed with the
17 Commission, its staff, and interested parties potential modifications and
18 improvements to the hedging program.

19 **Q. PLEASE EXPLAIN A FUTURES CONTRACT.**

20 A. A futures contract is an agreement between a buyer and a seller to make or
21 take cash payment for a physical commodity at an agreed price with the actual
22 delivery date and payment to take place at a set date in the future. Traded on the

1 NYMEX, delivery periods, specifications and locations for delivery, quantity, and
2 the timing and method of payment are all standardized. The standardized quantity
3 is 10,000 MMBtu of gas at the standardized place of delivery, Sabine Pipe Line
4 Co.'s Henry Hub in Louisiana. The NYMEX clearinghouse serves as the
5 intermediary between the two parties engaged in the transaction and stands behind
6 the contract guaranteeing performance. The majority of trades, however, do not
7 culminate in delivery of the physical products as futures contracts are used for
8 price discovery and managing price volatility.

9 **Q. PLEASE EXPLAIN AN OPTION CONTRACT.**

10 A. Options give holders the right, but not the obligation, to buy (call option) or
11 sell (put option) at a specified price (called the strike price) over a specified time.
12 A market participant may buy call options to protect its position in the underlying
13 commodity in the event of a price increase during the period preceding the
14 expiration of the option. For example, if a market participant is short (need to
15 buy) the underlying commodity, it may buy a call option to protect itself against a
16 price increase.

17 On the other hand, a market participant may buy put options to protect its
18 position in the underlying commodity in the event of a price decrease during the
19 period preceding the expiration of the option. For example, if a market participant
20 is long the underlying commodity (need to sell), it may buy a put option to protect
21 its position in the event of a price decrease. In sum, an option contract functions

1 much like an insurance policy, serving to protect the market participant against
2 price volatility.

3 **Q. PLEASE EXPLAIN A SYNTHETIC CALL.**

4 A. A synthetic call is a financial instrument available for use as part of SCPC's
5 hedging program. Simply stated, a synthetic call is a financial position created by
6 combining futures contracts and put options. This combination of financial
7 instruments replicates the properties of a call option. If a market participant owns a
8 synthetic call and prices increase beyond the strike price of the put, the put will
9 expire un-exercised and the gain from the sale of the previously purchased futures
10 contract will be used to offset the higher gas cost. If, however, the cost of gas
11 declines, the gain from the sale of the now valuable put will be used to offset the
12 loss on the futures transaction allowing gas to then be purchased in the physical
13 market at the lower price. The synthetic call provides upside price protection
14 while still allowing the hedger to participate in a price decline similar to a call
15 option. The primary advantage of entering into a synthetic call versus the purchase
16 of a call option is that a synthetic call provides the protection of a call at a fraction
17 of the cost.

18 **Q. HOW DOES SCPC MEASURE THE PERFORMANCE OF THE HEDGING**
19 **PROGRAM?**

20 A. Since the inception of the hedging program, SCPC has reported results as
21 measured against a benchmark, in this case the average market price of natural gas.
22 For purposes of the hedging program, the average market price is defined as the

1 simple average of the NYMEX settle price while the given month is the closest
2 nearby being traded. During the period under review a majority of the positions
3 were purchased with the objective of locking in projected low prices. The market
4 moved in favor of these positions from the time they were in place to the time the
5 average market price was measured. The result was that the average NYMEX
6 market price exceeded the average hedging purchase price realized during this PGA
7 period and resulted in gas hedges that were lower than the average NYMEX market
8 price.

9 **Q. WHAT WAS THE EFFECT OF THE HEDGING PROGRAM ON THE**
10 **WEIGHTED AVERAGE COST OF GAS DURING THE REVIEW PERIOD?**

11 A. During the twelve months ending December 31, 2003, the hedging program
12 subtracted \$14,669,999 from the Weighted Average Cost of Gas ("WACOG").

13 **Q. SINCE ITS INCEPTION HAS THE HEDGING PROGRAM ALWAYS**
14 **REDUCED THE COST OF GAS TO THE WACOG DURING EACH**
15 **PERIOD UNDER REVIEW?**

16 A. No. While SCPC's hedging program has reduced the WACOG in the past,
17 there have been instances in which SCPC's hedging program has added to cost of
18 gas included within the WACOG. Since inception the hedging program added
19 \$4,237,198 to the WACOG through December 31, 2003. Exhibit No. ____ (JSB-
20 1) shows the results since inception of the program, and Exhibit No. ____ (JSB-2)
21 shows the results on a per dekatherm basis since inception of the program.
22 However, it is important to remember that the primary goal of SCPC's hedging

1 program is to reduce price volatility through the purchase of gas financial
2 instruments at the average market price over the long term; a goal which is being
3 achieved.

4 **Q. DO YOU HAVE ANY CONCLUDING REMARKS?**

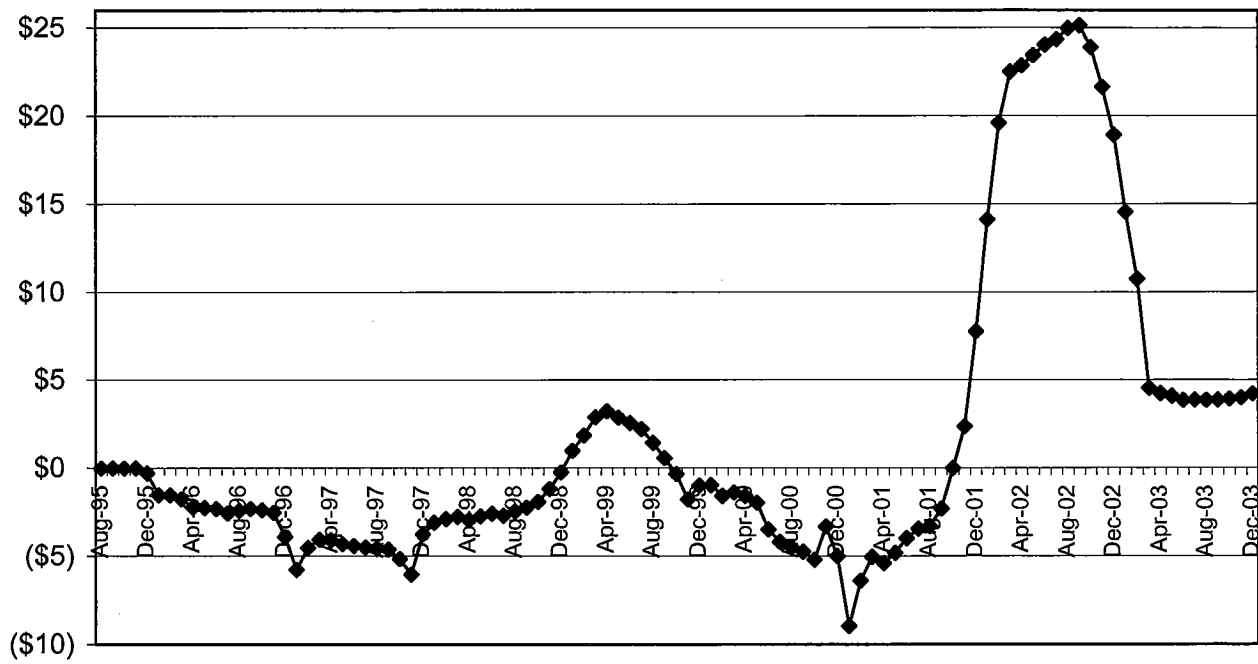
5 A. Yes. While evaluation and further education are continual processes, which
6 may lead to further refinements in the hedging program, SCPC believes that its
7 hedging program is very sound, and no changes are currently anticipated or
8 required. Further, SCPC believes that the program is a prudent tool, useful in
9 reducing volatility associated with the price of gas.

10 Therefore, on behalf of SCPC, I ask that the Commission find that SCPC
11 operated its hedging program in compliance with Commission orders and that
12 SCPC's operation of its hedging program during the period under review was
13 reasonable and prudent. Further, I respectfully request that the Commission allow
14 SCPC to continue operating its hedging program at the presently approved level of
15 up to 75% of estimated gas purchases for firm customers.

16 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

17 A. Yes.

**South Carolina Pipeline Corporation
Hedging Program
Cumulative Effect on the Cost of Gas
(Subtraction from) / Addition to the Cost of Gas (millions)**



**South Carolina Pipeline Corporation
Cumulative Effect of Hedging Program
Dollars per Dekatherm**

